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AGRICULTURAL EDUCATION OFFERINGS IN COMMUNITY COLLEGES IN THE UNITED STATES, A RESEARCH REPORT OF A GRADUATE STUDY. RESEARCH SERIES IN AGRICULTURAL EDUCATION.

BY- SNEPP, NEIL O. WOODIN, RALPH J.
OHIO STATE UNIV., COLUMBUS, COLL. OF AG. HOME EC.

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PRIOR TO PROPOSING A POSTSECONDARY PROGRAM IN AGRICULTURE FOR OHIO COMMUNITY COLLEGES, QUESTIONNAIRES WERE SENT TO 161 COMMUNITY COLLEGES IN 34 STATES TO SECURE RECOMMENDATIONS FROM EXPERIENCED PERSONS AND TO DETERMINE THE STATUS OF EXISTING PROGRAMS. RESPONSES WERE RECEIVED FROM 116. ADDITIONAL DATA WERE COLLECTED FROM 44 STATE DIRECTORS OF VOCATIONAL EDUCATION. AGRICULTURE WAS TAUGHT AT APPROXIMATELY 30 PERCENT OF THE COLLEGES, AND ADULT AGRICULTURAL EDUCATION PROGRAMS WERE PRACTICALLY NONEXISTENT. GUIDELINES FORMULATED TO PROVIDE DIRECTION FOR THE OHIO PROGRAM INCLUDED -- (1) AGRICULTURAL PROGRAMS IN OHIO COMMUNITY COLLEGES SHOULD BE FORMULATED AND COORDINATED ON A STATEWIDE BASIS, (2) AGRICULTURAL PROGRAMS SHOULD BE DEVELOPED FOR TERMINAL-TECHNICAL, TRANSFER, VOCATIONAL, AND ADULT STUDENTS IN THE ORDER LISTED, (3) TRANSFER PROGRAMS SHOULD BE DEVELOPED IN COOPERATION WITH THE SENIOR AGRICULTURAL COLLEGES OF THE STATE, (4) AGRICULTURAL INSTRUCTORS SHOULD HOLD AT LEAST A MASTER'S DEGREE AND HAVE PREVIOUS TEACHING EXPERIENCE, (5) THE MAXIMUM TEACHING LOAD SHOULD BE 16 CLASS HOURS PER WEEK WITH A STUDENT-TEACHER RATIO OF 20 TO 1, (6) THE MINIMUM NUMBER OF FULL-TIME EQUIVALENT STUDENTS ENROLLED SHOULD BE 120, (7) AT LEAST 50 PERCENT OF THE CAPITAL COST FOR AGRICULTURAL PROGRAMS SHOULD BE PROVIDED BY STATE FUNDS, AND (8) OPERATING EXPENSES SHOULD BE SHARED EQUALLY BY STATE AND LOCAL TAXES AND STUDENT TUITION. COPIES OF THE QUESTIONNAIRES ARE INCLUDED. (SL)

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RESEARCH SERIES IN AGRICULTURAL EDUCATION

A Research Report
of a
Graduate Study

# AGRICULTURAL EDUCATION OFFERINGS IN COMMUNITY COLLEGES IN THE UNITED STATES

Noll O. Snapp and Ralph J. Woodin

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# AGRICULTURAL OFFERINGS IN COMMUNITY COLLEGES IN THE UNITED STATES

The major purposes of the study was to propose an initial post-secondary program in agriculture at the community college level for Ohio. In order to give direction to the accomplishment of the major purpose of the study, selected aspects of the agricultural programs in public junior colleges in the United States were identified, opinions of persons engaged in agricultural programs at community colleges regarding the most desirable program in agriculture were secured, and implications and guidelines for agricultural programs in community colleges were developed.

A listing of public community colleges with agricultural offerings was compiled using the American Council on Education's American Junior Colleges, 5th edition, as a reference. A stratified sample containing the names of 161 junior colleges in 34 states was drawn. The information sought was collected by means of a mail questionnaire and responses were received from 116 colleges, or 72 per cent of the sample. Additional data concerning the problems of establishing and operating agricultural programs in community colleges was collected from 44 of the 50 state directors of vocational education.

Two types of conclusions were drawn, the first being based upon the existing situation as reported by the respondents, and the second based upon the respondents' opinions of the most desirable agricultural programs in community colleges.

## Conclusions

Two types of conclusions concerning agricultural programs were drawn in this study. The first were those based on the situation as it was reported to exist by the respondents. The second set of conclusions were based on the respondent's opinion of what constituted the most desirable agriculture programs in community colleges.

### Conclusions based on the existing situation

1. Agriculture was listed as a curricular offering by approximately 30 per cent of the public junior colleges.

2. The majority of the junior colleges listing agriculture offered pre-agriculture courses consisting of the basic general education courses.

3. Transfer and terminal-technical programs were the most common type of agricultural programs, enrolling over 80 per cent of the agricultural students. Adult education programs in agriculture in the junior college were practically non-existent.

4. Agricultural enrollments in the majority of the junior colleges with agricultural programs included less than 50 students. However, 25 per cent of the junior colleges had agricultural enrollments of over 100 students and the most comprehensive agricultural programs were found in these colleges.

5. The majority of the agricultural students commuted, were high school graduates, and had a farm background.

6. Attention was given to recruitment of agricultural students in nearly all of the junior colleges and a variety of methods were used.

7. Junior colleges with agricultural programs generally provided the same student services as might be expected on the campus of a four-year college.

8. The agricultural faculty and staff generally held advanced degrees, were certified by the local institution or a state agency, and, in most cases, had heavy teaching loads.

9. State funds were used to meet capital costs by 90 per cent of the junior colleges with 60 per cent of them receiving more than 50 per cent of capital costs from the state. Operating costs were usually met by a combination of state and local funds and student tuition.

10. The majority of the junior colleges had adequate facilities for teaching agriculture including classrooms, laboratories, shops, and institutional farms.

11. The officials of the State Department of Vocational Education were available for advice and consultation upon request.

12. The major problems in establishing and operating agricultural programs in junior colleges were those of attaining public understanding and adequate financial support.

Conclusions based on opinions reported

1. Agricultural programs in junior colleges should be comprehensive in that they provide for transfer, terminal-technical, vocational, and adult students.

2. Separate classrooms, laboratories, and farm mechanics shops are essential and land, livestock, greenhouses, and forests are desirable for the operation of agricultural programs in junior colleges.

3. Agriculture faculty and staff in junior colleges should hold at least a Master's degree along with a teaching certificate.

4. The maximum teaching load should be 16 class hours per week with a student-teacher ratio of 20 to 1 or less.

5. Agricultural students in junior colleges should be high school graduates or the equivalent.

6. State funds should provide for at least 50 per cent of the capital costs and 33 per cent of the operating costs for all aspects of the junior college.

Summary of guidelines for establishing agricultural programs in Ohio community colleges

As a result of this study, a number of guidelines have been formulated to provide direction for the development of agricultural programs in Ohio community colleges. These guidelines were developed on the basis of the data reported, the opinions of the respondents, and other related studies.

1. Agriculture should be a part of the offerings in selected community colleges in Ohio.

2. Agriculture programs in Ohio community colleges should be formulated and co-ordinated on a state-wide basis.

3. Agricultural programs should be developed for terminal-technical, transfer, vocational, and adult students in the order listed.

4. Agricultural curricula should be developed on the basis of the needs of agricultural industry and business, the community and the students.

5. Advisory committees consisting of leaders in agricultural business should be used to assist in program development, especially in the area of terminal-technical programs.

6. Transfer programs should be developed in co-operation with the senior agricultural colleges of the state.

7. Agricultural programs in community colleges should be organized as a separate department with a department head or chairman.

8. The major responsibility for program development should be delegated to the department chairman.

9. The agricultural staff should consist of at least six full-time instructors.

10. Agricultural instructors should hold a Master's degree or higher and have had previous teaching experience.

11. The maximum teaching load should be 16 class hours per week with a student-teacher ratio of 20 to 1.

12. The minimum number of full-time equivalent agricultural students enrolled should be 120.

13. Prospective full-time students should be high school graduates or be able to pass an equivalency test. Special students should be able to meet course requirements. In addition, entrance forms, physical examinations, placement tests, and a personal interview should be required.

14. Separate agricultural facilities including classrooms, laboratories, shops, and an economical land unit should be available, in one unit. Additional facilities should be provided to meet the needs of special programs.

15. The agricultural library should be a part of the main library.

16. At least 50 per cent of the capital costs for agricultural programs should be provided for by state funds.

17. Operating expenses should be met by state and local taxes, and student tuition equally.

18. State funds for operating expenses should be available for adult education programs.

19. Additional fees should be charged students residing outside the college district and the state.

20. Agricultural departments in community colleges should consult and co-operate with other agricultural education agencies in the state.

21. An organized public information program should be instituted and maintained in order to acquire public understanding of the role of agriculture in the community college.

## Method of Investigation

The first step was to compile a listing of those public community colleges with agricultural offerings. American Junior Colleges, 5th edition, was used as a reference. The resulting list contained the names of 233 community colleges in 34 states. A stratified sample was drawn containing 153 schools from 26 states. In order to secure data on all the various types of organizations, it was decided to include at least one school from each state. Therefore, eight colleges were added to the list resulting in a total sample of 161 schools in 34 states.

An instrument was designed to collect the desired data. It was reviewed by three persons who had had experience at the state level and outside of Ohio. Suggestions for improvement were made and the instrument was revised. It was the opinion of the reviewers that while the instrument was long, it could be answered in a reasonable length of time.

The instrument was mailed with a covering letter to the director of agriculture at the respective schools. Follow-up letters were mailed to the agriculture departments and the college presidents at two-week intervals. The assistance of the state director of vocational agriculture was solicited to secure the final responses. The total number of responses received was 116, or 72 per cent of the total sample. Of the total responses, 36 completed questionnaires were received.

In order to secure additional background on post secondary agricultural education, the state directors of vocational education were asked for information relative to the comparative enrollment in technical education by the several branches of vocational education. Names of schools offering post secondary technical education in agriculture were sought as well as opinions concerning problems in establishing and operating technical education programs. Responses were received from 44 states.

## Additional Findings of the Study Regarding Offerings of Agriculture in Community Colleges

Sixty per cent of the respondents stated they had no agricultural programs; nine per cent had discontinued agriculture or became senior colleges; and 31 per cent returned completed questionnaires. It was noted that 22 of the schools reporting no agriculture offered one or two years of a pre-agriculture curriculum.

TABLE 1

NUMBER OF JUNIOR COLLEGES REPORTING WHICH OFFERED AGRICULTURAL PROGRAMS ON A FULL-TIME, PART-TIME, AND EVENING BASIS, 1963

| Basis | Number of Schools |
|---|---|
| Full-Time | 33 |
| Part-Time | 14 |
| Evening | 9 |
| Full-Time Only | 15 |
| Part-Time Only | 1 |
| Full-Time and Part-Time | 10 |
| Full-Time and Evening | 4 |
| Full-Time, Part-Time, and Evening | 4 |
| No Answer | 3 |

Schools which had discontinued agriculture courses had done so because of low enrollment and problems of transferring credit to four-year institutions.

Total enrollment

Considerable variation was reported in the number of full-time students enrolled with the majority of the schools enrolling over 500 full-time students. Approximately 75 per cent of the schools reported part-time enrollments of fewer than 500 students as shown in Table 2.

TABLE 2

1962-63 TOTAL ENROLLMENT REPORTED BY 32 JUNIOR COLLEGES WITH AGRICULTURAL PROGRAMS

| Enrollment | Full-Time Number | Part-Time Number |
|---|---|---|
| 500 or under | 15 | 22 |
| 501-1,000 | 10 | 3 |
| 1,001-2,000 | 3 | 2 |
| Over 2,000 | 4 | 2 |

Agricultural enrollments

The agricultural enrollment was equal to about eight per cent of the total enrollment. Agricultural enrollments of fewer than 50 students were reported by 50 per cent of the respondents, while 27 per cent reported agricultural enrollments of over 100 students. The number of colleges with agricultural enrollments in excess of 100 students were equally divided between local independent junior colleges and schools designated as part of the state university system.

TABLE 3

1962-63 AGRICULTURAL ENROLLMENT REPORTED BY 33 JUNIOR COLLEGES WITH AGRICULTURAL PROGRAMS

| Enrollment in Agriculture | Total No. of Schools | Transfer No. | Terminal Technical No. | Voca-tional | Adult Special |
|---|---|---|---|---|---|
| 50 or less | 17 | 21 | 14 | 9 | 1 |
| 51-100 | 7 | 6 | 1 | 2 | 1 |
| 101-200 | 5 | - | 2 | 1 | - |
| 201-300 | 2 | 1 | 2 | - | - |
| Over 300 | 2 | - | - | - | - |

Agricultural enrollment was about equally divided between transfer programs and terminal-technical programs as indicated in Table 3. These two programs accounted for over 80 per cent of the agricultural enrollment. Few adults were being served according to the data received.

TABLE 4

1962-63 AGRICULTURAL ENROLLMENT BY TYPE OF PROGRAM AS REPORTED BY 33 JUNIOR COLLEGES WITH AGRICULTURAL PROGRAMS

| Program | Number | Per Cent of Total |
|---|---|---|
| Transfer | 1,234 | 42 |
| Terminal-Technical | 1,173 | 40 |
| Vocational | 446 | 15 |
| Adult, Special | 101 | 3 |
| Total | 2,954 | 100 |

The equivalent of one-third of the enrollment in each type of agricultural program completed their programs in 1962. The equivalent of 95 per cent of those transfer students who completed the junior college program transferred to four-year institutions.

TABLE 5

THE NUMBER OF STUDENTS COMPLETING AGRICULTURAL PROGRAMS IN 1962 BY TYPE OF PROGRAM AS REPORTED BY 31 JUNIOR COLLEGES

| Program | Number |
|---|---|
| Transfer | 425 |
| Terminal-Technical | 372 |
| Vocational | 140 |
| Total | 937 |

Expected enrollment trends

It was reported that enrollments were expected to increase in all types of agricultural programs except adult programs during the next five years. Several respondents reported agricultural

enrollments had increased by 15 to 20 per cent per year for the past three years.

Proportion of agricultural students commuting

Approximately 56 per cent of the agricultural students commuted to schools with the remainder living on campus. Approximately 80 per cent of those students commuting traveled less than 20 miles according to Table 6. The majority of the students living on campus were enrolled in state agricultural schools.

TABLE 6

THE PER CENT OF AGRICULTURAL STUDENTS COMMUTING VARIOUS DISTANCES AS REPORTED BY 31 JUNIOR COLLEGES

| Distance Traveled | Per Cent Commuting |
|---|---|
| Under 10 miles | 26 |
| 10-19 miles | 17 |
| 20-29 miles | 9 |
| 30-39 miles | 2 |
| 40-49 miles | 1 |
| Total Commuting | 56 |

Students with farm background

Over three-fourths of the agricultural students enrolled had farm backgrounds. However, some schools reported that less than ten per cent of their agricultural students had a farm background. Students without farm backgrounds were enrolled in all types of agricultural programs.

Means of securing student enrollment

Nearly all schools employed several methods of securing student enrollment. Former and present students were rated as the most effective, followed by the agricultural staff visiting high schools, and high school vocational agriculture teachers. A number of other means were considered to be less effective.

Financial aids for students

Financial aids to agricultural students were available at the majority of colleges in the form of scholarships, loans, and work opportunities.

Scholarships usually were provided by memorial funds, state scholarships, service clubs, and agricultural businesses.

Loans were normally available as either short-term or long-term loans with some National Defense Education Act funds being available.

Most of the work opportunities provided by the college were on the school farm, in the dining halls, or in the library.

A need for additional financial aids for students was indicated.

Admission standards

Full-time agricultural students were required to be high school graduates or pass an equivalency test in the majority of the schools reporting. This procedure was also reported as being the most desirable. Desirable admission standards in the opinion of the respondents are presented in Table 7.

TABLE 7

DESIRABLE ADMISSION STANDARDS FOR FULL-TIME AGRICULTURE STUDENTS IN JUNIOR COLLEGES IN THE OPINION OF 27 RESPONDENTS

| Requirement | Number Reporting |
|---|---|
| Be a High School Graduate | 16 |
| Pass an Equivalency Test | 8 |
| Graduation or Equivalency Test Not Required | 2 |
| Have a Farm Background | 1 |

Special students were normally admitted if they could meet course requirements. It was implied that special students were considered as individual cases. The age of the prospective student was not considered to be an important factor in the majority of cases either in actual practice or in terms of being a desirable practice. It was generally agreed that entrance forms, placement tests and physical examinations should be required for admission. It was also noted that physical examinations were not a requirement in approximately 50 per cent of the schools reporting. Minimum age requirements are shown in Table 8.

TABLE 8

MINIMUM AGE REQUIREMENTS FOR ADMISSION TO AGRICULTURAL PROGRAMS AS REPORTED BY 24 JUNIOR COLLEGES

| Minimum Age | Number of Responses |
|---|---|
| None | 9 |
| 18 | 6 |
| 17 | 4 |
| 16 | 5 |

Faculty and staff

The chairman of the agricultural department was the administrative officer in charge of agricultural programs in two-thirds of the schools reporting. It was also the opinion of the majority of the respondents that this was the most desirable practice.

Final jurisdiction over agricultural programs in community colleges was normally left to the chief college administrator and this practice was also reported to be the most desirable by the majority of the respondents. There were some respondents, however, who believed that final jurisdiction should be left to a state board or to the state director of vocational education.

Certification standards for agricultural staff members were determined by the local institution in approximately one-half of the schools reporting. In remaining instances, standards were determined by a state agency.

Opinions as to the most desirable practice were nearly identical. In view of the nearly equally divided opinions, the most satisfactory procedure may be for the local institution to determine standards in co-operation with the appropriate state agency.

It was reported that in a majority of the states the state agency was authorized to determine standards.

Academic degree required

Two-thirds of the colleges reporting required faculty members to hold a Master's degree or higher. In actual practice three-fourths of the staff members held advanced degrees. Again opinions as to the most desirable practice were similar to actual practice although four respondents reported all staff members hold a Doctor's degree.

Tables 9, 10, and 11 present additional information on academic requirements and beginning salaries.

TABLE 9

THE ACADEMIC DEGREE REQUIRED FOR AGRICULTURAL INSTRUCTORS IN JUNIOR COLLEGES AS REPORTED

| Degree Required | Number Reporting |
|---|---|
| Bachelor's | 10 |
| Master's | 23 |
| Doctor's | 0 |
| No Set Minimum | 1 |
| No Answer | 2 |
| Total | 36 |

TABLE 10

THE MINIMUM ACADEMIC DEGREE RECOMMENDED FOR JUNIOR COLLEGE AGRICULTURE INSTRUCTORS BY 23 RESPONDENTS

| Degree | Number Responding | % |
|---|---|---|
| Doctor's | 4 | 17 |
| Master's | 15 | 65 |
| Bachelor's | 4 | 17 |

TABLE 11

THE MINIMUM BEGINNING SALARY REPORTED FOR DIFFERENT DEGREE LEVELS FOR AGRICULTURE INSTRUCTORS IN 28 JUNIOR COLLEGES

| Range | B.S. | M.S. | Ph.D. |
|---|---|---|---|
| Upper Limit | $6,970 | $6,990 | $12,360 |
| 3rd Quartile | 5,500 | 6,000 | 7,200 |
| Median | 4,900 | 5,350 | 6,600 |
| Lower Limit | 4,000 | 4,500 | 5,600 |
| Average | $5,086 | $5,483 | $ 7,012 |

Teaching load of faculty

Information on the teaching load of faculty teachers is presented in Tables 12 and 13. The majority of the schools reported the maximum teaching load to be 16 hours per week or less. The average maximum teaching load was nearly 26 hours per week with some schools' respondents teaching 30 hours per week. The majority of the respondents preferred 16 hours or less per week with the average desirable maximum being 16.4 hours per week.

TABLE 12

THE MAXIMUM DESIRABLE TEACHING LOAD FOR JUNIOR COLLEGE AGRICULTURAL INSTRUCTORS IN CLASS HOURS PER WEEK ACCORDING TO 24 RESPONDENTS

| Hours Per Week | Number Reporting |
|---|---|
| 14 | 3 |
| 15 | 7 |
| 16 | 5 |
| 17 | 2 |
| 18 | 3 |
| 20 or More | 4 |
| Average | 16.4 |

TABLE 13

OPINION OF 31 RESPONDENTS RELATIVE TO THE MOST DESIRABLE AGRICULTURE STUDENT-TEACHER RATIO IN JUNIOR COLLEGES

| Ratio Students: 1 faculty | Number Reporting |
|---|---|
| 15 or Less | 10 |
| 16-25 | 17 |
| 26-35 | 4 |
| Average | 20.5-1 |

Student-teacher ratios ranged from less than 15 to 1 up to 50 to 1 with the average reported being 23 to 1. Nearly all of the respondents indicated that the most desirable ratio would be less than 25 to 1 with average reported being 20 to 1.

Financing agricultural programs

There appeared to be some reluctance on the part of the respondents to react to financial questions. The community colleges reporting indicated that capital costs were normally met by a combination of state and local funds with two-thirds of the schools receiving 50 per cent or more capital costs from the state. The state share of the capital costs depended in part upon the state plan for junior colleges. Only three schools were reported as using federal funds for capital costs although seven respondents favored the use of these funds. All but two respondents expressed the opinion that the state should provide at least 50 per cent of the required capital funds.

Operating expenses were met by funds from several sources, the most frequently used being a combination of state and local taxes, and student tuition supplemented by federal funds when available.

The most frequent apportionment in this case was one-third each to state, local taxes, and student tuition.

The above source of operating funds was also considered to be the most desirable although opinion was divided concerning the share that should be met by each. While one group favored a division of one-third of the expenses to each source of revenue, a similar group preferred to divide the costs one-half to state and one-half to local funds with no tuition payments.

Tuition and fees

Fees and tuition charged students varied by section of the country and by type of institutional control. Some variation in fees by type of program was also evidenced. The average annual charge for fees and tuition reported was $132 for transfer programs and $175 for terminal-technical programs. This information is presented in Table 14.

TABLE 14

TOTAL ANNUAL FEES AND TUITION REPORTED FOR FULL-TIME AGRICULTURAL STUDENTS IN COMMUNITY COLLEGES BY TYPE OF PROGRAM, 1962-63

| Amount $ | Number Reporting | |
|---|---|---|
| | Transfer | Terminal-Technical |
| None | 6 | 11 |
| Under 50 | 4 | 4 |
| 50-100 | 7 | 4 |
| 101-150 | 7 | 4 |
| 151-200 | 5 | 4 |
| Over 200 | 7 | 4 |

Non-resident fees for out-of-state students ranged from $40 to $600 per year with the most frequent charge being $300 per year.

It was estimated that the total cost of a year's schooling in the colleges reporting including fees, tuition, room, board, books, and personal expenses, would range from $1,000 to $1,250 for a student living on campus.

Schools which offered both transfer and terminal programs charged the same fees for each program. Six schools reported that fees for vocational programs were the same as fees for transfer or terminal programs. Seven additional schools reported that fees for vocational programs varied with the type of program. Fees for these vocational programs were assessed on the basis of the number of credit hours scheduled at a rate of from $1.00 to $13.50 per credit hour. Fees for enrollment in adult courses were assessed at a flat rate per credit hour or for the course selected.

Students who completed junior college agricultural programs were charged a graduation fee in two-thirds of the schools reporting. The average fee charged was $7.55.

## Facilities

The respondents were asked to rate the adequacy of the facilities they were using for agricultural instruction. Classrooms were rated as adequate to excellent by approximately 90 per cent of the respondents. Farm mechanics shops, laboratory facilities, and land available were reported to be acceptable to excellent by 75 per cent of the respondents. Approximately 25 per cent of the respondents considered the available livestock and poultry to be inadequate. The majority of those colleges with school forests, greenhouses, and separate agricultural libraries reported them to be adequate.

The colleges that reported all agricultural facilities to be inadequate had agricultural enrollments of less than 50 students while those colleges reporting all agricultural facilities as being acceptable to excellent had agricultural enrollments of above 150 students.

Approximately 25 per cent of the agriculture departments reporting shared some facilities with other departments in the college. Laboratories, shops, classrooms, and audio-visual facilities were the ones most frequently shared with other departments. The greatest problems reported to exist in the sharing of facilities were those of scheduling and of insufficient space in shops and laboratories.

Plans for expanding agricultural facilities during the succeeding three years were reported by 21 colleges with classrooms and laboratories being the most frequently listed.

More than 80 per cent of the respondents reported that separate classrooms, laboratories, and farm mechanics shops for agriculture were essential for conducting agricultural programs as were agricultural references in the main library as shown in Table 15. Less than 50 per cent of the respondents reported that land, livestock, and poultry, greenhouses, school forests, and separate agricultural libraries were essential for teaching agriculture.

TABLE 15

ESSENTIAL AND DESIRABLE FACILITIES FOR AGRICULTURAL PROGRAMS IN JUNIOR COLLEGES ACCORDING TO 23 RESPONDENTS

| Facility | Essential | | Desirable | |
|---|---|---|---|---|
| | Number | Per Cent | Number | Per Cent |
| Classrooms for Agriculture | 21 | 91 | 1 | 4 |
| Laboratories for Agriculture | 21 | 91 | 1 | 4 |
| Agriculture Included in Main Library | 20 | 87 | 1 | 4 |
| Farm Mechanics Shop | 19 | 83 | 4 | 17 |
| Land for Study of Crops and Agronomy | 10 | 44 | 10 | 44 |
| Greenhouses | 10 | 44 | 12 | 52 |
| All Classes of Livestock and Poultry | 9 | 39 | 10 | 44 |
| School Forest | 5 | 22 | 11 | 49 |
| Separate Agriculture Library | 2 | 9 | 16 | 70 |

Programs and curricula

A wide variety of agricultural curricula were reported as being available by the respondents. It appeared to the writer that in some cases courses had been reported instead of curricula. Nearly all of the curricula reported were available to transfer, terminal-technical, and vocational students. The catalogues of the junior colleges reporting listed 18 different transfer curricula, and 26 different terminal-technical curricula. This information is shown in Table 16.

TABLE 16

AGRICULTURAL CURRICULA AVAILABLE BY TYPE OF PROGRAM IN JUNIOR COLLEGES REPORTING FOR THE 1962-63 SCHOOL YEAR

| Curricula | Number of Schools Reporting | | |
|---|---|---|---|
| | Transfer | Terminal-Technical | Vocational |
| Animal Science | 28 | 23 | 5 |
| Crop Production | 27 | 17 | 7 |
| Agronomy | 25 | 15 | 8 |
| Botany | 23 | 8 | 1 |
| Dairy Production | 22 | 15 | 6 |
| Zoology | 22 | 7 | 1 |
| Poultry Production | 20 | 11 | 5 |
| Horticulture | 19 | 11 | 3 |
| General Agriculture | 15 | 16 | 9 |
| Forestry | 15 | 7 | 1 |
| Veterinary Science | 15 | 3 | 2 |
| Agricultural Engineering | 14 | 10 | 4 |
| Farm Shop | 12 | 13 | 6 |
| Agricultural Business | 12 | 12 | 3 |
| Conservation | 12 | 6 | 1 |
| Farm Machinery Science | 10 | 8 | 4 |
| Wild Life Management | 8 | 4 | 1 |
| Landscaping | 6 | 9 | 6 |
| Pomology | 5 | 3 | 2 |
| Greenhouse Practice | 4 | 4 | 4 |
| Floriculture | 3 | 7 | 2 |
| Farm Equipment Sales | 3 | 5 | 1 |
| Agricultural Marketing | 3 | 5 | 0 |
| Agricultural Chemicals | 3 | 3 | 0 |
| Dairy Plant Technology | 2 | 6 | 1 |
| Agricultural Service | 2 | 5 | 1 |
| Entomology | 2 | 0 | 0 |
| Range Management | 1 | 1 | 0 |
| Turf Grass Technician | 0 | 1 | 0 |
| Nursery Manager | 0 | 1 | 1 |

Typical transfer programs consisted of 25 to 30 per cent agricultural courses with the remainder being general education courses. A greater variety of agricultural courses were required for terminal-technical programs than for transfer programs. Interdepartmental curricula were noted in the areas of agricultural business, sales and service, with the business courses being taught by instructors in the business department.

Two colleges reported that they offered animal science and agricultural engineering technician programs. These curricula were highly structured, highly specialized, and were nearly devoid of agricultural production courses.

Work experience in the student's major field was a typical requirement, espeically in terminal-technical curricula. College credit for work experience was normally granted. Several colleges required work experience regardless of the type of program in which the student was enrolled.

Development of agricultural programs

It was the opinion of over 90 per cent of the respondents that transfer and terminal-technical programs in agriculture should be offered by the junior college. Approximately 80 per cent of the respondents indicated that adult programs in agriculture should be offered while 68 per cent reported that vocational programs should be offered.

The respondents further expressed the opinion that transfer programs should be developed first followed by terminal-technical, vocational, and adult programs in that order. Only two colleges reported that they were operating adult programs in agriculture. Table 17 indicates the number of years that four different types of agricultural programs had been offered in community colleges. Tables 18 and 19 provide additional information on agricultural programs in these institutions.

TABLE 17

NUMBER OF YEARS VARIOUS TYPES OF AGRICULTURAL PROGRAMS HAD BEEN OFFERED IN COMMUNITY COLLEGES

| Number of Years | Number of Schools Reporting | | | |
|---|---|---|---|---|
| | Transfer | Terminal-Technical | Vocational | Adult |
| Under 10 | 4 | 6 | 4 | 2 |
| 10-20 | 17 | 11 | 7 | 7 |
| 21-30 | 4 | 7 | 2 | 1 |
| Over 30 | 6 | 3 | 3 | 0 |
| Average Number of Years | 20 | 19 | 18 | 14 |

TABLE 18

THE TYPE OF AGRICULTURAL PROGRAMS THAT SHOULD BE OFFERED IN COMMUNITY COLLEGES IN THE OPINION OF 36 RESPONDENTS

| Type of Program | Number of Schools Reporting | | |
|---|---|---|---|
| | Should be Offered | Should Not be Offered | No Answer |
| Transfer | 34 | 0 | 2 |
| Terminal-Technical | 32 | 1 | 3 |
| Vocational | 23 | 6 | 7 |
| Adult | 27 | 1 | 8 |

TABLE 19

MAJOR FACTORS WHICH DETERMINED WHETHER A COURSE OF STUDY IN AGRICULTURE SHOULD BE ADDED, DROPPED, OR REVISED IN JUNIOR COLLEGES REPORTING, 1963

| Factor | Times Listed |
|---|---|
| Needs of Student, Community, or Industry | 16 |
| Demand | 9 |
| Enrollment | 10 |
| Student Interest | 7 |
| Requirements of Four-Year Institutions | 6 |

TABLE 19 (Continued)

| Factor | Times Listed |
|---|---|
| Staff Available | 5 |
| Facilities Available | 4 |
| Cost of Program | 3 |
| Place in Approved Curricula | 1 |

Responsibility for program development

The responsibility for the development, revision, and expansion of the agricultural program was normally vested in the head of the agricultural department. A number of other persons and agencies were also reported as assisting in this work. The use of advisory committees was a common practice, especially in the development of terminal-technical programs.

The factors most frequently reported as determining whether or not a program should be added or dropped were those of community, industry, and student need. The availability of staff and facilities were listed as factors which determined the ability of the college to operate new agricultural programs.

Problems in establishing and operating agricultural programs in junior colleges

Respondents in junior colleges reported that the greatest problems in establishing agricultural programs in junior colleges were those of securing suitable facilities, adequate financial support, student enrollment, planning for expansion of the program, and attaining public understanding in the order listed as shown in Table 20.

The State Department of Vocational Education reported that procuring adequate financial support, attaining public understanding, securing qualified faculty, suitable facilities, and student enrollment presented the greatest problems in establishing agricultural programs in the order listed. State Directors of Vocational Education generally rated these problems as being more difficult than did the junior college respondents.

TABLE 20

DEGREE OF DIFFICULTY OF PROBLEMS ENCOUNTERED IN ESTABLISHING AGRICULTURAL PROGRAMS IN COMMUNITY COLLEGES AS REPORTED BY 36 COLLEGE PRACTITIONERS, 1963

| Problem | Average Rating |
|---|---|
| Securing Suitable Facilities | 2.66 |
| Procuring Adequate Financial Support | 2.53 |
| Securing Student Enrollment | 2.30 |
| Plans for Expansion of Program | 2.25 |
| Acquiring Public Understanding | 2.13 |
| Securing Qualified Faculty | 1.97 |
| Standardization of Curriculum Titles and Content Within the State | 1.91 |
| Developing Appropriate Curriculum | 1.85 |
| Co-ordination of Programs Within the State | 1.82 |
| Maintaining High Quality of Instruction | 1.46 |
| Obtaining Instructional Materials | 1.41 |
| Placement of Graduates | 1.24 |
| Determining Admission Standards for Students | 1.09 |
| Certification of Staff | .87 |
| Awarding of Degrees and Certificates | .87 |

The junior college respondents reported that procuring adequate financial support, maintaining suitable facilities, student enrollment, plans for expanding the program, and maintaining public understanding were the most difficult problems in operating agricultural programs in junior colleges in that order. Their responses are presented in Table 21.

TABLE 21

DEGREE OF DIFFICULTY PRESENTED BY PROBLEMS IN OPERATING AGRICULTURAL PROGRAMS IN JUNIOR COLLEGES BY 36 COLLEGE PRACTITIONERS, 1963

| Problem | Average Rating |
|---|---|
| Procuring Adequate Financial Support | 2.26 |
| Maintaining Suitable Facilities | 2.22 |
| Maintaining Student Enrollment | 2.09 |
| Plans for Expansion of the Program | 2.03 |
| Maintaining Public Understanding | 1.94 |
| Developing Appropriate Curriculum | 1.58 |
| Obtaining Instructional Materials | 1.57 |
| Co-ordination of Programs Within the State | 1.55 |
| Securing Qualified Faculty | 1.50 |
| Standardization of Curriculum Titles and Content Within the State | 1.48 |
| The Same Courses Being Taken by Students of all These Types of Programs | 1.48 |
| Effective Use of Facilities | 1.38 |
| Placement of Graduates | 1.34 |
| Maintaining High Quality Instruction | 1.28 |
| Transferring Credit to Four-Year Institutions | 1.00 |
| Determining Admission Standards for Students | 1.00 |
| Certification of Staff | .85 |
| Awarding of Degrees and Certificates | .61 |

The data presented earlier in Table 18 indicated that transfer programs should be developed first in new junior colleges, followed by terminal-technical, vocational, and adult programs. The closeness of the ratings, however, suggested that it would be justifiable to develop terminal-technical programs prior to the development of transfer programs in some instances.

## Related Studies

Carter made a comprehensive study of agricultural programs in junior colleges in the United States in 1954.[1] Useable returns were

[1]John Thomas Carter, "A Study of Agricultural Programs in the Junior Colleges of the United States with Proposals for Further Development," Ph.D. dissertation, The University of Illinois, 1954.

received from 70 of the 140 schools who had indicated that they offered agricultural courses or programs of college grade. As a result of this study, Carter arrived at the following conclusions:

1. The junior college is in a position to fill a gap in the present programs of instruction in agriculture.

2. In general the junior college is doing a satisfactory job of preparing agricultural students for transfer to a senior college.

3. Most junior college teachers of agriculture are, relatively speaking, well prepared for their work.

4. Many junior colleges do not maintain facilities needed for laboratory instruction.

5. Laboratory facilities for teaching introductory courses should be provided by the junior college without excessive cost.

6. To be adequate, a junior college program of agricultural instruction must provide for the needs of both terminal and university preparatory students.

7. It is extremely difficult for a department of agriculture to be effective when staffed by only one teacher.

8. Junior colleges have hardly scratched the surface in providing instruction in agriculture for adults.

9. There is at present no generally accepted set of criteria that junior colleges may use in setting up departments of agriculture or evaluating the laboratory facilities, instructional methods and other phases of their programs.

Carter also concluded that a number of problems of relationships exist between the junior colleges and the land grant colleges regarding standards and transfer of credit to the land grant colleges. Points four, five, and seven above substantiate the finding of Phillips.

These studies suggest that Ohio educators should bear these points in mind in order to prevent the same weaknesses from appearing in any programs which may be developed in Ohio.

Carter recommended that administrators and teachers of agriculture in junior colleges consider ways of serving the adult population in their communities. A further recommendation was for additional studies to determine the types of non-farming agricultural occupations that will furnish opportunity for employment and the types of training needed for them. Brum's study should provide this information for Ohio.[2]

Clyburn developed a set of evaluative criteria for agricultural programs in the junior college in 1953.[3] He drew on the literature for a list of functions which were restated in terms of principles. These, with evaluative questions, were submitted to a jury, revised, and given a trial application. The final draft contained 18 criteria in nine areas. The areas included were as follows: (1) programs of instruction, (2) instructional plant and facilities, (3) library facilities and services, (4) departmental organization and staff, (5) supervision of instructors, (6) administration, (7) articulation, (8) community service, and (9) public relations. These criteria were printed and distributed to the 110 schools with agricultural offerings.

---

[2]Herbert B. Brum, "Opportunities for Agricultural Occupations in Ohio," Ph.D. dissertation study in progress, The Ohio State University, 1963.

[3]Lloyd E. Clyburn, "Criteria for Evaluating Programs of Agriculture in the Community College," Ph.D. dissertation, Louisiana State University, 1953.

Recommendations were made to the American Association of Junior Colleges for further application and revision of the criteria. These criteria will provide additional guides to planning new programs, plant and facilities for agricultural programs in community colleges in Ohio as they develop.

A survey of the standards in selected areas of the junior college was conducted by the Committee on Standards for Agricultural Education of the National Agricultural College Teachers Association. Elgin Hall, Chairman, Agriculture Division, Orange Coast College, California, visited 42 junior colleges, 32 land grant universities, and 36 four-year colleges. A mail questionnaire was also used. Three major areas were considered as follows: 1. Standards and qualifications for personnel, 2. Standards for instruction, and 3. Standards for facilities. In evaluating the instructional staff, Hall propounded the following questions to junior college administrators:

1. If you were hiring new agricultural instructors, would you require them to be graduates of a land grant university?

2. From where were your present agriculture instructors graduated?

3. What degree level would you require of new agricultural instructors?

4. Would you permit them to teach in other than their major field?

5. Would you require instructors to take additional training in their field periodically?

There was no definite majority opinion concerning the necessity of instructors being graduates of a land grant university. Graduates of four-year agricultural colleges were equally acceptable by

college administrators. Only two respondents, however, stated they would hire the instructor regardless of school if he seemed qualified.

It was also revealed that 62 per cent of the agricultural instructors then on the staff had in fact graduated from land grant universities and 30 per cent from four-year agricultural colleges.

Two-thirds of the schools required a Master's degree, the remaining one-third declared a Bachelor's degree to be sufficient. Two-thirds of the respondents required teaching in the major field only, while all the remaining respondents except two would permit teaching in a minor field. These two respondents would permit agricultural instructors to teach without either a major or minor. Instructors should be required to take additional training to maintain their proficiency according to 80 per cent of the respondents. The above situations applied regardless of whether the instructor was teaching transfer or terminal students.

In terms of instructional programs, over 85 per cent taught both terminal and transfer students in the same courses. There were a few cases of separate classes for each group. Textbooks were required by 60 per cent for each type of course. Only 30 per cent required a three-hour laboratory period for each course taught. All respondents indicated complete laboratory facilities should be available although a few were not so equipped. The majority of respondents indicated business courses in an agricultural business program should be taught by the business department.

A number of facilities were surveyed with more divided opinions given than in the preceding areas. The majority preferred the agriculture library in the main library. An acceptable size of the

agriculture library was approximately 600 volumes although eight schools actually had less than 200 volumes.

Opinion as to the size of a school farm was varied. Nearly 25 per cent said it was unnecessary. The majority favored farms between ten acres and 200 acres in size. The number and type of livestock on the college farm depended upon the majors offered. The majority indicated the following:

Dairy - 25-50 cows, milk processing plant
Animal Science - Beef, sheep, and swine
Poultry - Complete operation from brooding through the laying cycle

Hall concluded that junior college standards in these areas were very high. The respondents were assumed to be representative of junior colleges.

Clark[4] in Michigan and Rohr[5] in Wisconsin have also completed studies which tend to reinforce the preceding in terms of the need for additional training in agricultural business. In addition, a North Carolina study by Blackmon and Dawson points up the need for increased training of adults presently employed in non-farm agricultural occupations.[6]

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[4]Raymond M. Clark, Need for Training for Non-Farm Agricultural Business (East Lansing: Michigan State University, 1959).

[5]Charles G. Rohr, "An Investigation of the Training Required by Workers in Agricultural Business in Waukesha, Wisconsin," Master's thesis, University of Wisconsin, 1960.

[6]John H. Blackmon and Cleburn G. Dawson, Need for Training for Non-Farm Agricultural Occupations (Raleigh: North Carolina Department of Public Instruction, 1961).

A recent study in Illinois[7] recommends a state-wide system of junior colleges as the most promising method for organizing vocational and technical education programs beyond the high school. It states that the curricula should be organized where the students are rather than in relationship to employment, existing public schools, or senior institutions. This is listed as the most important criterion of organization.

A changing view of the nature of the junior college is later indicated by this statement:

> The emphasis of recent years on the community college appears to be losing its edge. The reason is simple. The small local institution can no longer compete in a complex world. The junior colleges of the future must have a comprehensive program to serve a wide distribution of economic interests and purposes, hence it must serve a large population, one that usually does not fit the traditional meaning of a community as it has been in the past. The community can no longer be interpreted narrowly as a basis for determining the nature of the program or the method of financial support.[8]

All of the studies reviewed in this chapter have implications for developing agricultural programs in community colleges in Ohio. The states reporting--California, Illinois, Michigan, North Carolina, Wisconsin--are similar in many ways. They have had experience in operating community colleges. It appears logical, therefore, that some of the findings, conclusions, and recommendations in these studies may well apply to the development of a similar program in Ohio.

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[7]William P. McClure et al., Vocational and Technical Education in Illinois (Urbana: College of Education, The University of Illinois, 1960), p. 81.

[8]Ibid., p. 106.

The major areas that have been studied which apply to Ohio include agricultural business, agricultural sales and service, horticulture and nursery management. A part of the North Carolina study pertaining to forestry workers might also be applicable to the forest industries of Ohio.[9]

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[9]John H. Blackmon and Cleburn G. Dawson, loc. cit.

# APPENDIXES

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# APPENDIX A

## LIST OF COLLEGES SURVEYED

Alaska
- Anchorage Community College

Arizona
- Eastern Arizona Junior College

Arkansas
- Arkansas State College - Beebe Branch

California
- Antelope Valley College
- Bakersfield College
- Cerritos College
- City College of San Francisco
- College of San Mateo
- College of the Sequoias
- Compton College
- El Camino College
- Fullerton Junior College
- Lassen Junior College
- Long Beach City College
- Los Angeles Pierce College
- Modesto Junior College
- Mount San Antonio College
- Napa Junior College
- Oakland City College
- Orange Coast College
- Palo Verde College
- Pasadena City College
- Porterville College
- Reedley College
- Riverside City College
- Sacramento City College
- San Bernardino Valley College
- Santa Ana College
- Santa Monica City College
- Santa Rosa Junior College
- Sierra Junior College
- Taft College
- Vallejo Junior College
- Ventura College

Colorado
- Fort Lewis A. and M. College
- Mesa College
- Northeastern Junior College
- Otero County Junior College
- Trinidad State Junior College

Florida
- Central Florida Junior College
- Chipola Junior College
- Palm Beach Junior College
- St. Johns River Junior College

Georgia
- Abraham Baldwin Agricultural College
- Columbus College
- Georgia Southwestern College
- Middle Georgia College
- South Georgia College

Idaho
- Boise Junior College

Illinois
- Centralia Township Junior College
- Chicago City Junior College:
  - Amundsen Branch
  - Crane Branch
  - Woodrow Wilson Branch
  - Wright Branch
- Elgin Community College
- Joliet Junior College
- Lyons Township Junior College
- Thornton Junior College

Iowa
- Burlington College
- Clarinda Junior College
- Eagle Grove Junior College
- Ellsworth Junior College
- Esterville Junior College
- Muscatine Junior College
- Webster City Junior College

Kansas
- Arkansas City Junior College
- Coffeyville College
- El Dorado Junior College
- Garden City Junior College
- Highland Junior College
- Hutchinson Junior College
- Independence Community College
- Pratt Junior College

Kentucky
- Paducah Junior College

Maine
- University of Maine in Portland

Maryland
- Hagerstown Junior College

Massachusetts

Michigan
- Alpena Community College
- Community College and Technical Institute (Benton Harbor)
- Grand Rapids Junior College
- Jackson Junior College
- Port Huron Junior College

Minnesota
- Austin Junior College
- Brainerd Junior College
- Eveleth Junior College
- Hibbing Junior College
- Rochester Junior College
- Worthington Junior College

Mississippi
- Copiah-Lincoln Junior College
- East Central Junior College
- Hinds Junior College
- Itawamba Junior College
- Jones County Junior College
- Northeast Mississippi Junior College
- Northwest Mississippi Junior College
- Pearl River Junior College
- Southwest Mississippi Junior College

Missouri
- Joplin Junior College
- Junior College of Flat River
- Moberly Junior College
- Trenton Junior College

Montana
- Custer County Junior College

Nebraska
- Norfolk Junior College
- Scottsbluff College

New Mexico
- New Mexico Military Institute

New York
- State University of New York Agricultural and Technical Institute at:
  - Alfred
  - Canton
  - Cobleskill
  - Delhi
  - Morrisville

North Carolina
- Asheville-Biltmore College

North Dakota
- North Dakota School of Forestry

Oklahoma
- Cameron State Agricultural College
- Connors State Agricultural College
- Eastern Oklahoma A. and M. College
- Murray State Agricultural College
- Northeastern Oklahoma A. and M. College
- North Oklahoma Junior College
- Oklahoma Military Academy

Oregon
- Central Oregon College

Pennsylvania
- Pennsylvania State University Commonwealth Campus System
  - Dubois Campus
  - Hazelton Campus
  - Pottsville Campus

Texas
- Arlington State College
- Blinn College
- Frank Phillips College
- Howard County Junior College
- Kilgore College
- Laredo Junior College
- Odessa College
- Panola College
- Paris Junior College
- Ranger College
- San Antonio College
- South Plains College
- Southwest Texas Junior College
- Tarleton State College
- Temple Junior College
- Texas Southmost College
- Tyler District College
- The Victoria College
- Wharton County Junior College

Utah
- Snow College

Virginia
- Danville Branch of Virginia Polytechnic Institute

Washington
- Centralia Junior College
- Clark College
- Columbia Basin College
- Everett Junior College
- Lower Columbia Junior College
- Olympic College
- Skagit Valley College
- Wenatchee Valley College
- Yakima Valley Junior College

West Virginia
Potomac State College of West Virginia University

Wisconsin
University of Wisconsin Extension Centers at:
Manitowoc
Marathon County
Sheboygan

Wyoming
Goshen County Community College
Northwest Community College
Sheridan College

APPENDIX B

Return by February 25, 1963, to:
Neil O. Snepp
Department of Agricultural Education
Agricultural Administration Building
2120 Fyffe Road
Ohio State University
Columbus 10, Ohio

DIRECTIONS

This questionnaire is designed to obtain basic information concerning post-high school terminal training programs in agricultural technology. Terminal training refers to instruction of college caliber of at least one and usually two years duration. All respondents please answer questions 1-7 inclusive. If no programs in agricultural technology are in operation, omit 8-10.

1. Name of State_____

2. How many institutions in your state offer terminal programs in the following areas:
   Home Ec.____ T and I____ D.E.____ Business____ Agr.____

3. What is the present enrollment in technical education in your state in each of these types of institutions:

| | H.Ec. | T&I | Ag. | D.E. | Business |
|---|---|---|---|---|---|
| University branches? | | | | | |
| Public community / junior colleges? | | | | | |
| Private junior colleges? | | | | | |
| Technical institutes? | | | | | |
| Others (Please specify) | | | | | |

4. What was the total number of graduates of agricultural technology programs in 1962?_____

5. Do you plan to add terminal programs in agricultural technology in the next 1 year?____ 2 years?____ 3 years?____

6. If yes, do you expect that these programs will be offered in the community colleges?____ university branches?____ technical institutes?____ others? (Please specify)_____
_____

7. Would you please enclose the following items with your return:

   a. A list of the names and addresses of the institutions in your state offering terminal programs in agricultural technology.
   b. A copy of the legislation, written policies, and regulations affecting the establishing and operation of such programs in your state.
   c. The certification requirements for instructional staff at the post-high school level.

8. Please check the relationships that exist between your office and the institutions offering these agricultural technology programs:

   a. Available upon request for advice and consultation_____
   b. Give approval of the initial program_____
   c. Responsible for inspection and accreditation_____
   d. Responsible for supervision and program_____
   e. Coordinate all programs in the state_____
   f. Certification of instructional staff_____
   g. Administer financial support of programs_____
   h. Other (Please specify)_____
   _____

9. Listed below are a number of problems which may be encountered in <u>establishing</u> terminal programs in agricultural technology. Please check each item as to the degree of difficulty it presents in your opinion.

| | Great | Considerable | Some | Less | None |
|---|---|---|---|---|---|
| a. Procuring adequate financial support | | | | | |
| b. Securing suitable facilities | | | | | |
| c. Securing qualified faculty | | | | | |
| d. Certification of staff | | | | | |
| e. Determining admission standards for students | | | | | |
| f. Securing student enrollment | | | | | |
| g. Acquiring public understanding | | | | | |
| h. Developing appropriate curriculum | | | | | |
| i. Standardization of curriculum titles and content within the state | | | | | |

| | Great | Considerable | Some | Less | None |
|---|---|---|---|---|---|
| j. Coordination of programs within the state | | | | | |
| k. Effective use of facilities | | | | | |
| l. Maintaining high quality of instruction | | | | | |
| m. Obtaining instructional materials | | | | | |
| n. Awarding of degrees and certificates | | | | | |
| o. Placement of graduates | | | | | |
| p. Plans for expansion of the program | | | | | |

10. Please check the below listed items as to the degree of difficulty they present in <u>operating</u> a terminal program of agricultural technology after it has been established.

| | Great | Considerable | Some | Less | None |
|---|---|---|---|---|---|
| a. Procuring adequate financial support | | | | | |
| b. Maintaining suitable facilities | | | | | |
| c. Securing qualified faculty | | | | | |
| d. Certification of staff | | | | | |
| e. Determining admission standards for students | | | | | |
| f. Maintaining student enrollment | | | | | |
| g. Maintaining public understanding | | | | | |
| h. Developing appropriate curriculum | | | | | |

| | Great | Considerable | Some | Less | None |
|---|---|---|---|---|---|
| i. Standardization of curriculum titles and content within the state | | | | | |
| j. Coordination of programs within the state | | | | | |
| k. Effective use of facilities | | | | | |
| l. Maintaining high quality of instruction | | | | | |
| m. Obtaining instructional materials | | | | | |
| n. Awarding of degrees and certificates | | | | | |
| o. Placement of graduates | | | | | |
| p. Plans for expansion of the program | | | | | |

# APPENDIX C

## QUESTIONNAIRE CONCERNING AGRICULTURAL PROGRAMS IN COMMUNITY COLLEGES

### DIRECTIONS AND DEFINITIONS

The purpose of this questionnaire is to: (1) Determine the status of selected aspects of post secondary agricultural programs in community colleges, and (2) Secure opinions from experienced persons in this field as a basis for recommending improvements in agricultural programs in community colleges.

In order to avoid confusion over terminology, the following broad definitions are given:

Agricultural programs - Any course of study in agricultural production, related businesses, service, sales, marketing, and engineering. Includes forestry, conservation, horticulture, veterinary science and related areas.

Pre-Professional training - Preparation for advanced study at the college level, equivalent to the first two years of college training, at the completion of which the student plans to transfer to a four-year institution to complete the requirements for a Bachelor's degree. (This has also been referred to as transfer and college parallel programs.)

Semi-Professional training - College caliber instruction of at least one and usually two years duration. Designed to provide training at a level above the craftsman but below the Bachelor's degree. Normally the student plans to enter employment upon the completion of two years training. This has also been referred to as terminal or technical training.

Vocational training - As used here refers to post-high school instruction of a year or less, designed to train for a particular job or skill. Usually contains little or no theory and no general education.

Adult, Special - Classes organized to meet special needs and/or interests of adults, who are normally already employed. Length of course varies, usually held in the evening. May be credit or non-credit.

The information reported will be treated in a confidential manner, and reported only in the summaries. It is not necessary to sign the questionnaire; however, we would like to know the name of the school, state, and title of the respondent.

Thank you very much for your cooperation in this endeavor.

Return

Neil O. Snepp
Department of Agricultural Education
2120 Fyffe Road
Ohio State University
Columbus 10, Ohio

Name of Institution_____State_____

Administering Agency (e.g., local board, state board, branch of state university, etc.)_____

Official title of respondent_____

A. ENROLLMENT AND STUDENT POPULATION

1. The total number of students currently enrolled in this institution is as follows: Full time - Men___ Women___ Part time - Men____ Women___

2. The current (1962-63) enrollment in agricultural programs is as follows: Pre-professional___, Semi-professional____, Vocational___, Other___.

3. The number of out-of-state students in agriculture is___

4. The number of foreign students in agriculture is____

5. The number of students completing agricultural programs in 1962 was: Pre-professional___, Semi-professional___, Vocational___

6. How many of the students enrolled in agriculture in 1962 transferred to a four-year institution?_____

7. Please indicate the trends in enrollment in agricultural programs that you expect in your school in the next five years.

| | MORE | SAME | LESS |
|---|---|---|---|
| Pre-professional | | | |
| Semi-professional | | | |
| Vocational | | | |
| Other | | | |

8. Approximately what per cent of the students in agriculture commute the following distances: 10 miles or less____, 10-19 miles____, 20-29 miles___, 30-39 miles____, 40-49 miles____, 50 or more miles____.

9. What per cent of the agricultural students live on campus (dormitory, private fraternity, sorority)?_____

10. Approximately what per cent of the students in agriculture have a farm background?_____

11. Any additional comments regarding enrollment and student population:_____

_____

_____

B. STUDENT SERVICES

1. Listed below are a number of student services which may be available to students. In Column 1, please check the services presently available on campus. In Column 2, check those services which are not presently available but which, in your opinion, should be available.

| | Available | Not Available But Should Be |
|---|---|---|
| Orientation program for entering students | | |
| Guidance tests | | |
| Placement services | | |
| Scholarships | | |
| Student loan fund | | |
| Student work opportunities | | |
| Health services | | |
| Dormitory space available for: | | |
| All | | |
| Some | | |
| Majority | | |
| None | | |
| Eating arrangements at: | | |
| Cafeteria | | |
| Dormitory | | |
| Intercollegiate athletics | | |
| Intramural athletics | | |
| Fraternities | | |
| Sororities | | |
| Faculty adviser for each student | | |
| Remedial clinics | | |
| Religious activities | | |
| Student government | | |
| Student bookstore | | |
| Other (Please specify) | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |

2. Additional comments:

_____

_____

_____

C. SECURING ENROLLMENT

1. Please indicate by a check mark the degree of effectiveness of those methods which you use to secure enrollment in agricultural programs.

| | Most Effective | Very Effective | Moderately Effective | Little Effectiveness | None |
|---|---|---|---|---|---|
| High school vocational agriculture teachers | | | | | |
| High school guidance personnel | | | | | |
| College guidance personnel | | | | | |
| College staff members visiting high schools | | | | | |
| Career days at the college | | | | | |
| Printed materials sent to high schools | | | | | |
| Agricultural Extension Agents | | | | | |
| Present students | | | | | |
| Former students | | | | | |
| Other (Please specify) | | | | | |
| _____ | | | | | |
| _____ | | | | | |
| _____ | | | | | |
| _____ | | | | | |

2. Any additional comments regarding the securing of enrollement: _____

_____

_____

## D. ADMISSION STANDARDS

This section is designed to secure information concerning admission requirements. We are asking for a threefold reaction. In the first column, indicate by the appropriate letter what is required by your state regulations. In the second column indicate the current practice of your institution and in the last column what you personally think would be the most desirable or ideal. If more than one letter is required to complete the answer, so indicate in the proper column. If the statement does not apply, indicate by use of the letters N.A.

| | State Regulation | Your Practice | Ideal |
|---|---|---|---|
| 1. To attend agriculture programs full time, students must be (a) a high school graduate, (b) able to pass an equivalency test if not a high school graduate, (c) admitted regardless of completion of high school, (d) have a farm background, (e)_____ | | | |
| 2. Short term or special students (a) have no admission requirements, (b) are admitted if they meet course requirements, (c) _____ | | | |
| 3. Students must be at least (a) 16, (b) 17, (c) 18 years of age and capable of profiting from the instruction offered. | | | |
| 4. Students living in another district (a) can attend if the home district does not provide the desire instruction, (b) can require the home district to pay the tuition, (c)_____ | | | |
| 5. Out-of-state students are (a) admitted if quota permits, (b) charged out-of-state fees, (c) not permitted to attend, (d)_____ | | | |

| | State Regulation | Your Practice | Ideal |
|---|---|---|---|
| 6. Prospective students are required to complete (a) an application form, (b) an entrance examination, (c) health certificate, (d)_____ | | | |

7. Additional comments:

_____

_____

_____

E. FACULTY AND STAFF

This section is designed to secure information concerning the requirements for faculty and staff. In the first column use the appropriate letter or letters (a, b, c) to indicate what is required by your state regulations. In the second column indicate the present practice of your school and in the third your personal opinion as to the ideal or most desirable practice. If the statement does not apply, use the letters N.A. in the appropriate column. Any additional comments will be appreciated.

| | State Regulation | Your Practice | Ideal |
|---|---|---|---|
| 1. The programs in agriculture are headed by (a) Dean, (b) Principal, (c) Director, (d) Department Head, (e)_____ | | | |
| 2. The certification standards for teaching agriculture in community colleges are determined by (a) State Superintendent of Public Instruction, (b) State Board of Education, (c) State Director of Vocational Education, (d) Officials of your institution, (e)_____ | | | |

| | State Regulation | Your Practice | Ideal |
|---|---|---|---|
| 3. Students must be at least (a) 16, (b) 17, (c) 18 years of age and capable of profiting from the instruction offered. | | | |
| 4. Students living in another district (a) can attend if the home district does not provide the desired instruction, (b) can require the home district to pay the tuition, (c)_____ | | | |
| 5. Out-of-state students are (a) admitted if quota permits, (b) charged out-of-state fees, (c) not permitted to attend, (d)_____ | | | |
| 6. Prospective students are required to complete (a) an application form, (b) an entrance examination, (c) health certificate, (d)_____ | | | |

7. Additional comments:

_____

_____

_____

E. FACULTY AND STAFF

This section is designed to secure information concerning the requirements for faculty and staff. In the first column use the appropriate letter or letters (a, b, c) to indicate what is required by your state regulations. In the second column indicate the present practice of your school and in the third your personal opinion as to the ideal or most desirable practice. If the statement does not apply, use the letters N.A. in the appropriate column. Any additional comments will be appreciated.

| | State Regulation | Your Practice | Ideal |
|---|---|---|---|
| 1. The programs in agriculture are headed by (a) Dean, (b) Principal, (c) Director, (d) Department Head, (e) _____ | | | |
| 2. The certification standards for teaching agriculture in community colleges are determined by (a) State Superintendent of Public Instruction, (b) State Board of Education, (c) State Director of Vocational Education, (d) Officials of your institution, (e)_____ | | | |
| 3. The minimum qualifications for instructional staff in agriculture are (a) Bachelor's degree, (b) Master's degree, (c) Doctor's degree, (d) valid teaching certificate, (e) suitable occupational experience where applicable, (f)_____ | | | |
| 4. Teachers in a community college are required to have (a) a regular certificate, (b) special certificate, (c) no certificate, (d)_____ | | | |
| 5. The executive who has final jurisdiction over agricultural programs is (a) district superintendent, (b) college or university administrator, (c) state director of vocational education, (d) | | | |

| | State Regulation | Your Practice | Ideal |
|---|---|---|---|
| 6. The maximum teaching load or equivalent for agriculture instructors in hours per week is (a) 14, (b) 15, (c) 16, (d) 17, (e) 18, (f)_____ | | | |

7. Instructors employed full time in agriculture include___ men and ____ women. Part-time instructors include_____ men and ____ women.

8. The degree held by the full-time staff are Doctor's____, Master's_____, and Bachelor's_____.

9. The degrees held by the part-time staff are Doctor's____%, Master's_____%, Bachelor's____%.

10. What is the minimum beginning annual salary for a full-time instructor with the following degrees: Bachelor's_____, Master's_____, Doctor's_____.

11. What is the current student-teacher ratio in agriculture? _____What do you consider to be the most desirable student-teacher ratio?_____

12. Additional comments:

_____

_____

_____

F. FINANCES

The purpose of this section is to secure information concerning methods of financing agricultural programs in community colleges. Please indicate in the first column what is required by your state regulations by use of the appropriate letter. In the second column, indicate the practice of your institution, and in the last column indicate your personal opinion as to the most desirable or ideal practice. If the statement does not apply, use the letters N.A. in the appropriate column.

| | State Regulation | Your Practice | Ideal |
|---|---|---|---|
| 1. Funds for capital expenditures in agriculture are provided by (a) State funds, (b) Federal funds, (c) local institution district, (d) gifts, grants, bequests and devices, (e) self-liquidating bonds, (f)_____ | | | |
| 2. State financial aid of capital costs is (a) 100, (b) 75, (c) 50, (d) 33 1/3, (e) 25, (f)____per cent. | | | |
| 3. The power to submit taxes for capital costs to a vote of the people of the district lies with (a) State governing agency, (b) governing board of the institution district, (c)_____ | | | |
| 4. The governing board of a community college district has the power to levy a tax of (a) 1/4, (b) 1/2, (c) 3/4, (d) 1, (e)____ mill per dollar of assessed valuation. | | | |
| 5. Operating costs are met by (a) combination of state (and federal when available) local taxes and student tuition, (b) State and Federal funds, (c) student tuition and state funds, (d) local taxes and tuition, (e) local taxes only, (f) state funds only, (g) | | | |

| | State Regulation | Your Practice | Ideal |
|---|---|---|---|
| 6. State funds for operating costs are provided through (a) special appropriations, (b) a foundation program (ADA or ADM) similar to that for elementary or secondary education, (c)_____ | | | |
| 7. Operating costs are apportioned (a) 1/3 each to state, local and tuition, (b) 1/2 each to state and local, (c) 3/4 state, 1/4 local, (d) | | | |
| 8. Personal books and supplies are furnished the student (a) free, (b) at his expense, (c) at cost, (d)_____ | | | |

9. The operating budget for agricultural programs for 1962-63 is _____

10. The capital improvements budget for agricultural programs for 1962-63 is _____

11. Please list the approximate annual tuition and fees for students in the various types of agricultural programs.

| | Pre Professional | Semi Professional | Vocational |
|---|---|---|---|
| Resident tuition | | | |
| Non-resident tuition | | | |
| General fees | | | |
| Laboratory fees | | | |
| Graduation fees | | | |
| Room and board | | | |
| Others (Please specify) | | | |
| | | | |
| | | | |
| | | | |

12. Additional comments:

_____

_____

_____

G. FACILITIES

1. In Part I please rate the facilities you are now using in connection with your agricultural programs. In Part II check those facilities that you deem essential in column 1. Check column 2 for those facilities that you deem desirable but not essential.

| | PART I | | | | | PART II | |
|---|---|---|---|---|---|---|---|
| | Excellent | Very Good | Acceptable | Fair | Inadequate | Essential | Desirable But Not Essential |
| Classrooms for agriculture | | | | | | | |
| Farm mechanics shops | | | | | | | |
| Laboratories for agriculture | | | | | | | |
| Land for the study of crops and agronomy | | | | | | | |
| School forest | | | | | | | |
| All classes of livestock and poultry | | | | | | | |
| Greenhouses | | | | | | | |
| Separate agriculture library | | | | | | | |
| Agriculture included in main library | | | | | | | |
| Others (specify) | | | | | | | |
| _____ | | | | | | | |
| _____ | | | | | | | |
| _____ | | | | | | | |

2. What facilities, if any, do you share with other departments?

_____

3. Does the sharing of facilities with other departments present any major problem? Yes___ No___ If yes, please list the problems involved.

_____

_____

_____

4. The maximum number of students that can be accomodated in agriculture with the present facilities and teaching staff is _____.

5. Please describe briefly any plans the college has for expanding the agricultural facilities in the next three years.

_____

_____

_____

H. PROGRAMS AND CURRICULUMS

The purpose of this section is to identify the programs and curriculums being offered and to secure opinions regarding the future development of programs in agriculture.

1. Please indicate by checking the list below the curriculums presently being offered and the level at which they are offered. Make any additions as needed. Refer to cover sheet for definitions. Curriculum refers to courses of study designed to develop competencies in a given area.

| Curriculum | Pre Professional | Semi Professional | Vocational |
|---|---|---|---|
| General agricultural production | | | |
| Crop production | | | |
| Horticulture | | | |
| Floriculture | | | |
| Pomology | | | |
| Greenhouse practice | | | |
| Landscaping | | | |
| Animal science | | | |
| Dairy production | | | |
| Poultry production | | | |
| Agronomy | | | |
| Agricultural engineering | | | |
| Farm shop | | | |
| Farm machinery service | | | |
| Farm equipment sales | | | |
| Agricultural business | | | |
| Agricultural marketing | | | |
| Agricultural chemicals | | | |
| Agricultural service | | | |
| Dairy plant technology | | | |
| Food processing technology | | | |
| Botany | | | |
| Zoology | | | |
| Veterinary science | | | |
| Forestry | | | |
| Conservation | | | |
| Wildlife management | | | |
| Others (Please specify) | | | |
| _____ | | | |
| _____ | | | |
| _____ | | | |

2. How many years have you offered the various types of agricultural programs in your school? Pre-professional_____, Semi-professional_____, Vocational____, Adult_____.

3. Please indicate the types of agricultural programs which, in your opinion, should or should not be offered in a community college by checking the appropriate box.

| | Should be Offered | Should not be Offered |
|---|---|---|
| Pre-professional | | |
| Semi-professional | | |
| Vocational | | |
| Adult | | |

4. In organizing agricultural programs in new community colleges or those without agricultural programs, which type of program, in your opinion, should normally be offered first? second? Indicate the order of development by marking 1, 2, 3, 4, the following list.

Pre-professional_____

Semi-professional_____

Vocational_____

Adult_____

5. Please indicate by a check the areas in which you plan to add or expand agricultural curriculums in the next three years.

| | 1 Year | 2 Years | 3 Years |
|---|---|---|---|
| Pre-professional | | | |
| Semi-professional | | | |
| Vocational | | | |
| Adult | | | |

6. Who is responsible for the development, revision, and/or expansion of agricultural programs in your institution? (Title)

_____

_____

_____

7. What are the major factors which determine whether a course of study should be added or dropped?_____
_____
_____

8. Are the agricultural programs organized as (a) separate department, (b) with another department____, (c) interdisciplinary program___, (d) other_____

9. If it is not organized as a separate department or division, please specify the area or areas of which it is a part.
_____
_____

10. Are some courses taken by students in all three types of programs? Yes___ No___

11. Agricultural programs are offered on a (please check) full time_____, part time_____, evening_____basis.

12. The institution operates on a quarter system____, semester system____, summer session_____.

13. Would you please enclose a copy of your current catalogue with this return?

14. What degrees and/or certificates do you award upon completion of the various types of programs?

Pre-professional_____

Semi-professional_____

Vocational_____

Adult_____

15. Additional comments regarding programs and curriculums:
_____
_____
_____

## I. RELATIONSHIPS BETWEEN STATE AGENCIES AND COMMUNITY COLLEGES

1. There are a number of relationships that may exist between the State Department of Vocational Education and the community college. Some of these are listed below. If the relationship exists and is satisfactory in your opinion, check column 1. If if does not exist but you think it should, check column 2. If the relationship is present but you think it should not exist, check column 3. Please feel free to add any others you deem appropriate.

| | Exists, Satisfactory | Does Not Exist But Should | Exists But Should Not |
|---|---|---|---|
| Available upon request for advice and consultation | | | |
| Give approval of the initial program | | | |
| Responsible for inspection and accreditation | | | |
| Responsible for supervision of program | | | |
| Coordinate all programs in the state | | | |
| Certification of instructional staff | | | |
| Administer financial support of programs | | | |
| Assist in securing qualified staff | | | |
| Provide in-service education for staff | | | |
| Other (Please specify) | | | |
| _____ | | | |
| _____ | | | |
| _____ | | | |

2. Additional comments:

_____

_____

_____

J. PROBLEMS OF ESTABLISHMENT AND OPERATION OF AGRICULTURAL PROGRAMS

1. Listed below are a number of problems which may be encountered in establishing programs in agriculture. Please check each item as to the degree of difficulty it presents in your opinion.

| | Great | Considerable | Some | Little | None |
|---|---|---|---|---|---|
| a. Procuring adequate financial support | | | | | |
| b. Securing suitable facilities | | | | | |
| c. Securing qualified faculty | | | | | |
| d. Certification of staff | | | | | |
| e. Determining admission standards for students | | | | | |

| | Great | Considerable | Some | Little | None |
|---|---|---|---|---|---|
| f. Securing student enrollment | | | | | |
| g. Acquiring public understanding | | | | | |
| h. Developing appropriate curriculum | | | | | |
| i. Standardization of curriculum titles and content within the state | | | | | |
| j. Coordination of programs withing the state | | | | | |
| k. Facilities | | | | | |
| l. Maintaining high quality of instruction | | | | | |
| m. Obtaining instructional materials | | | | | |
| n. Awarding of degrees and certificates | | | | | |
| o. Placement of graduates | | | | | |
| p. Plans for expansion of the program | | | | | |
| q. Other (Please specify) _____ | | | | | |
| _____ | | | | | |
| _____ | | | | | |

2. Please check the below listed items as to the degree of difficulty they present in operating a program of agriculture after it has been established.

| | Great | Considerable | Some | Little | None |
|---|---|---|---|---|---|
| a. Procuring adequate financial support | | | | | |
| b. Maintaining suitable facilities | | | | | |
| c. Securing qualified faculty | | | | | |
| d. Certification of staff | | | | | |
| e. Determining admission standards for students | | | | | |
| f. Maintaining student enrollment | | | | | |

| | Great | Considerable | Some | Little | None |
|---|---|---|---|---|---|
| g. Maintaining public understanding | | | | | |
| h. Developing appropriate curriculum | | | | | |
| i. Standardization of curriculum titles and content within the state | | | | | |
| j. Coordination of programs within the state | | | | | |
| k. Effective use of facilities | | | | | |
| l. Maintaining high quality of instruction | | | | | |
| m. Obtaining instructional materials | | | | | |
| n. Awarding of degrees and certificates | | | | | |
| o. Placement of graduates | | | | | |
| p. Plans for expansion of the program | | | | | |
| q. Transferring credit to four-year institutions | | | | | |
| r. The same course being taken by students of all three types of programs | | | | | |
| s. Others (Please specify) _____ | | | | | |
| _____ | | | | | |
| _____ | | | | | |

3. Additional comments:

_____

_____

_____

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# SELECTED BIBLIOGRAPHY

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In addition a listing of studies completed in Ohio pertaining to post-secondary education may be found in Appendix A.